

# In Conversation:

## Research Fellow Gabriela Kramer-Marek, Ph.D.

**CCR:** Gabriela, we understand that you traveled to Kyoto this fall to present your work at the 2010 World Molecular Imaging Congress. How did that come about?

**Gabriela:** Yes, I was honored to receive an invitation to speak at the biggest meeting in our field. The work I presented is the result of studies we have been pursuing since I came to the laboratory of Jacek Capala, Ph.D., in CCR's Radiation Oncology Branch, five years ago.

**CCR:** Can you tell us about your research?

**Gabriela:** We have developed a new approach for the noninvasive assessment of HER2/neu expression in breast cancer, using positron emission tomography (PET) imaging. It allows for detection of HER2/neu status in both the primary tumor and distant metastases and could also be used for monitoring the response to therapeutic intervention.

**CCR:** So is this a technology that is ready for patients?

**Gabriela:** Not yet, but our collaborators will begin clinical trials next year. When I came to the lab, the project was just a proposal. First, we had to develop the tracer. We used different positron emitters to label a relatively small protein (Affibody) that tightly binds to HER2/neu. After that we tested different tumor models as well as experimental conditions to acquire high-contrast PET images for quantification of receptor expression. At every step, there were challenges.

Fortunately, we have a great multidisciplinary team of researchers and very supportive collaborators.

**CCR:** What background did you bring to the work?

**Gabriela:** I trained as a medical physicist at Silesian University in Poland, which is where I am from originally. So I had a solid background in physics and I knew the theory of PET, but, of course, reading about something and working with it are two very different things. I had done my doctoral research on light-activated drugs as a cancer therapy, so I was immersed in oncology. But I don't think I had ever seen a laboratory mouse before I came here.

**CCR:** What made you come all the way to the NCI from Poland to continue your research?

**Gabriela:** Honestly, I never wanted to come to America. I had decided to continue my postdoctoral research in Portugal when I got an email from a friend saying that Jacek was looking for a fellow. After my interview with Jacek, I think I made the decision to come here within 24 hours. During my doctoral studies, I had conducted research in some well known institutions across Europe, but none had the breadth of opportunity I saw here.

**CCR:** And has the experience lived up to your expectations?

**Gabriela:** Definitely. The facilities are, of course, amazing. But so is the network of people here at NIH. You



(Photo: B. Branson)

Gabriela Kramer-Marek, Ph.D.

can find and count on the support of experts in any field of medicine. And the NIH Office of Intramural Training and Education has courses on how to give a good presentation, or write a grant. Especially as a foreigner, it is a great opportunity to get a lot of experience and improve your skills.